REMARKS

Claims 1-14, 16, 18-32, 34, 36-50, 52, and 54-56 are rejected under 35 USC §103(a) as being unpatentable over Singh et al., US Pat. No. 6,493,038, hereinafter "Singh," in view of Terasawa et al., US Pat. No. 6,147,714, hereinafter "Terasawa."

Claims 15, 17, 33, 35, 51, and 53 are rejected under 35 USC §103(a) as being unpatentable over Singh in view of Terasawa, further in view of Feinberg et al., US Published Patent Application 2002/0078440, hereinafter "Feinberg."

In view of the amendments and the Remarks, the Applicant respectfully requests reconsideration of the rejections and allowance of the pending claims.

Examiner Interview:

Applicant kindly thanks the Examiner and his Primary Examiner for their time on Thursday, March 19, 2009, during a telephone interview. During the interview, Applicant discussed the distinction between compression and scaling that is articulated below.

Rejections under 35 U.S.C. § 103(a)

The Supreme Court recently reaffirmed use of the *Graham* factors for determining obviousness under 35 U.S.C. § 103(a). *KSR Int'l Co. v. Teleflex, Inc.* (*KSR*), No 04-1350 (U.S. Apr. 30, 2007). The four factual inquiries under *Graham* require examination of: (1) the scope and content of the prior art; (2) the differences between the prior art and the claims in issue; (3) the level of ordinary skill in the pertinent art; and (4) the objective evidence of secondary consideration. *Graham v. John Deere* (*Graham*), 383 U.S. 1, 17-18, 149 USPQ 459, 467 (1966); 35 U.S.C. § 103.

Where there are differences between an Applicant's invention and a combination of prior art references, an Office Action "…must explain why the difference(s) would have been obvious to one of ordinary skill in the art." *Id.* Specifically, there must be a "…clear articulation of the reason(s) why the claimed invention would have been obvious." *Id.* In making the case for obviousness, the Examiner has the burden of establishing the case in a well-reasoned and articulate way. "To facilitate review, this analysis should be made explicit." *KSR* at 412, citing *In*

re Kahn, 441 F. 3d 977, 988 (CA Fed. 2006) "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*

This burden exists because "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR* at 412. Where an invention is contended to be obvious based upon a combination of references, one should be able to identify particular reasons that would have prompted one of ordinary skill in the art to combine the prior art elements. *See KSR* at 412-413. The requirement prevents the use of "…the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight." *Ecolochem, Inc. v. So. Cal. Edison Co.*, 227 F.3d 1361, 1371-72 (Fed Cir. 2000) (quoting *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999)). "When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the examiner to explain why the combination of the teachings is proper." *Ex parte Skinner*, 2 USPQ2d 1788 (Bd. Pat. App. & Inter. 1986).

Independent Claims 1, 19, 37, 55, 59, and 63

Claims 1, 19, 37, 55, 59, and 63 stand rejected as being unpatentable over Singh in view of Terasawa. The Applicant respectfully traverses this rejection.

For example, Applicant's claim 1 provides a constrained prediction process used during compression to preclude the use of information outside a restricted region, and recites in relevant part:

> receiving at least the first image;
>
> forming a first compressed image restricted to a first region of a first image area by representing at least one segment of the first image within the first region with a reference to another segment of the first image within the first region, thereby preparing the first image for integration with at least the second image (Emphasis added.)

Applicant notes that this limitation appears in each of the independent claims. Applicant respectfully submits the combination of Singh and Terasawa simply fails to teach this limitation.

For example, to support a rejection of claim 1, the Office Action alleges that the

combination of Singh and Terasawa discloses:

- "…forming a first compressed image…for an encoder in the form of a PIP DSP where a PIP image is a compressed form of the original image…" at Singh, FIG. 1, element 13, and FIG. 5, element 65; and
- where the first image is "restricted to a first region of a first image area by representing at least one segment of the first image within the first region with a reference to another segment of the first image within the first region" at Singh, FIG. 5, element 65, where a DSP "…scales down an image from its original size to a smaller size…", also citing Singh, FIG. 1a for locating it within a particular region of the screen.

Applicant respectfully disagrees. Applicant respectfully submits that there is no such compression taught in the combination of Singh and Terasawa.

Turning first to Singh, FIG. 1, there is no element 13.

Turning next to Singh, FIG. 5, upon which the OA relies in making the rejection for the combination, Singh's element 65 is described as follows at col. 4, lines 25-38:

> This video source can be selected via selector 64 as one of the inputs to the PIP DSP processor 65.
>
> The SUB1 and SUB2 inputs of the PIP DSP processor 65 accepts CVBS signals from an external tuner (VCR, DVD player, etc.) or internal video sources and makes them available as possible selectable inputs to the PIP DSP processor 65. Video at the input to the PIP DSP 65 from demodulator 63 is scaled to 1/16 or 1/9 of its original size and multiplexed with the YUV signal from the Philips Media Processor 53. The MAIN input to the PIP processor 65 is connected to the DV2 output from the media processor 53, which is capable of providing a picture containing program guide information on this output.

There is no teaching here of an encoder for forming a compressed image, as suggested by the OA. To be sure, there is clearly no teaching of an encoder forming a compressed image where a first image is restricted to a first region of a first image area by representing at least one segment of the first image within the first region with a reference to another segment of the first image within the first region.

As noted by the OA at page 2, the combination of Singh and Terasawa teaches "scaling" an image to 1/16 or 1/9 of its original size. However, as noted by Applicant in its response filed July 9, 2008, scaling and compression are entirely different techniques, as understood by those of ordinary skill in the art. Scaling has nothing to do with integrating images by using restricted region compression as recited in Applicant's independent claims. Simply resizing or repositioning images further has nothing whatsoever to do with compressing images, such as by MPEG-2 or MPEG-4 encoding, as discussed in the Application.

To be sure, Applicant makes this clear in its specification. By way of example, at paragraph [0034], Applicant states, "In order to present a barker within an OSD menu (for example in the upper right quadrant), the barker must be scaled to the appropriate size (perhaps 25% of its full size) and moved to a position on the screen (the top right corner) so the rest of the screen can be filled with menu."

Applicant then notes that this is possible in a STB: "For an STB having scaling/repositioning capabilities, the barker can be streamed to the STB and scaled and moved to the correct location by the STB." *Id.* Further, a conventional system capable of scaling is shown as Applicant's FIG. 1B, which is described at paragraph [0035].

Despite the fact that an image gets scaled, problems can still arise. For example, Applicant sets forth problems associated with such systems beginning at paragraph [0041] and continuing through subsequent paragraphs. Such problems would likely be present in the combination of Singh and Terasawa, as the combination fails to employ Applicant's restricted region technique.

From reading the combination of Singh and Terasawa, it appears that images are delivered in compressed form. As indicated above, no compression is taught at FIG. 5, element 65, as suggested by the OA. Further, the combination states that compression is not necessary at Singh, col. 3, lines 32-63. Specifically, Singh describes only *decompression*, stating, "The Transport stream is processed by the media processor 53 to separate out and decode the video stream. Fully decompressed pictures are available at the DVI output of the media processor 53 in YUV format, which is directly applied to the input of the Double Window module 71 via a data selector (YUV MUX) 77."

Applicant notes in its specification that video sent to a STB may be compressed using

techniques such as MPEG-2 and MPEG-4 prior to transmission. Application at [0059]-[0070]. However, where this is the case, motion estimation and compensation are problematic in combining a video with a menu because the combining process will change the reference values used for prediction by the video compressor. Application at [0071]. The mismatch of reference values used by the compressor and the decompressor, such as in a STB, can cause image corruption. Application at [0071]-[0078].

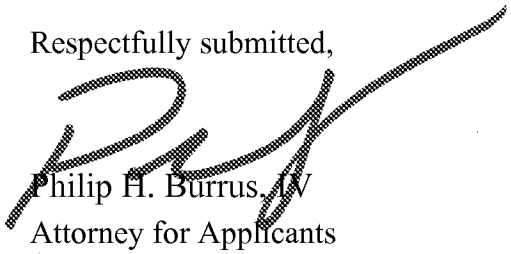
Applicant's invention provides a solution to this by providing a restricted region compression technique, in the STB, where a first compressed image is formed using compression restricted to a first region of a first image area by representing at least one segment of the first image within the first region with a reference to another segment of the first image within the first region. The combination of Singh and Terasawa fail first to teach compression within the STB, and further fails to teach the type of compression claimed by Applicant. As such, Applicant respectfully submits the rejection is overcome. Applicant respectfully requests reconsideration of the rejection in light of these comments.

Applicant notes that the addition of Feinberg does nothing to correct the deficiency of the combination of Singh and Terasawa. Accordingly, in view of the discussion above, claim 1 is allowable for at least the reason that the combination of Singh and Terasawa does not disclose forming a first compressed image restricted to a first region of a first image area, as recited by Applicant's independent claims. Applicant respectfully submits that all dependent claims are therefore allowable, as depends from an allowable independent claim, and for at least the reason that the cited language fails to disclose every element of each claim.

CONCLUSION

For the above reasons, Applicants believe the specification and claims are now in proper form, and that the claims all define patentably over the prior art. Applicants believe this application is now in condition for allowance, for which they respectfully submit.

Respectfully submitted,



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